

IN THE CLAIMS

Please amend the Claims as follows:

1. (currently amended) A method for ~~resolving~~ processing nested faults including the steps of comprising:
- determining whether a fault is a first level fault;
- responding to a determination of a first level fault with a first fault handler ~~by and~~ saving a first amount of state sufficient to handle a first level fault; and
- responding to a determination of a nested fault with a second fault handler ~~and by~~ saving an additional amount of state before handling the nested fault, wherein said second fault handler supercedes said first fault handler and processes said first level fault and said nested fault.
2. (currently amended) A method as claimed in Claim 1 in which the step of determining whether a fault is a first level fault comprises storing an indication when a first level fault handler is executed, and determining if an indication has been stored when a ~~level~~ nested fault handler is executed.
3. (currently amended) A method as claimed in Claim 1 further including the steps of executing a first level fault handler after saving a first amount of state sufficient to handle a first level fault, and executing a different fault handler after saving an additional amount of state before handling the nested fault.

4. (original) A method as claimed in Claim 3 further including the steps of executing epilogue sequences of instructions after handling any fault handler enabling return of execution to a correct sequence of instructions following a fault last handled.

5. (currently amended) A fault handler system comprising:

~~means for~~ a first fault determiner for determining whether a fault is a first level fault;

~~means for~~ a first fault handler for responding to a determination of a first level fault by saving a first amount of state sufficient to handle a first level fault;  
and

~~means~~ a second fault handler for responding to a determination of a nested fault by saving an additional amount of state before handling the nested fault, wherein said second fault handler supercedes said first fault handler and processes said first level fault and said nested fault.

6. (currently amended) A processor fault handler system as claimed in Claim 5 in which ~~the means for determining whether a fault is a first level fault~~ said first fault determiner includes storage media for holding an indication that a processor is handling a fault, and means for detecting the condition of the storage media.

7. (currently amended) A processor fault handler system as claimed in Claim 5 6 in which the storage media is a processor register.

8. (currently amended) A processor fault handler system as claimed in Claim 5 6 in which the means for detecting the condition of the storage media includes software running on the processor.

9. (currently amended) A processor fault handler system as claimed in Claim 5 in which ~~the means for responding to a determination of a nested fault by saving an additional amount of state before handling the fault~~ said second fault handler includes a second set of fault handling registers in addition to a first set of fault handling registers.

10. (new) A method for processing a nested fault comprising:  
detecting a first fault;  
storing a first amount of state associated with said first fault;  
invoking a first fault handler to process said first fault;  
detecting a nested fault;  
storing a second amount of state associated with said nested fault,  
wherein said second amount of state is greater than said first amount of state;  
and

invoking a second fault handler to process said nested fault wherein said second fault handler supercedes said first fault handler and processes said first fault and said nested fault.

11. (new) The method as recited in Claim 10 further comprising generating an indicator in response to invoking said first fault handler.

12. (new) The method as recited in Claim 11 further comprising storing said indicator in hardware.

13. (new) The method as recited in Claim 10 wherein said detecting said nested fault comprises detecting an indicator bit associated with said detecting said first fault.

14. (new) The method as recited in Claim 10 further comprising processing said first fault and said nested fault on said second fault handler in response to detecting said nested fault.